Applied Magnetic Resonance 2000 vol.19 N3-4, pages 355-362

Magnitude of spin and charge density wave amplitudes in underdoped cuprates

Eremin M., Varlamov S., Eremin I.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

Self-consistent calculation of spin (charge) density wave (S(C)DW) order parameters have been performed for bilayered cuprates on the basis of a singlet-correlated band model. Evolution of the Fermi surface in the strongly underdoped regime is described by a two-band approach. The smooth development of the pseudogap formation temperature from underdoped to overdoped states is explained and the Fourier amplitudes □sq□ (spin) and □eq□ (charge) modulations are calculated. We have found a maximum of the incommensurability for doping 0.09÷0.11 holes per copper site.